

# IN-SITU DETECTION OF THIN-METAL INTERFACE USING OPTICAL INTERFERENCE VIA A DYNAMICALLY UPDATED REFERENCE

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## ABSTRACT OF THE DISCLOSURE

An invention for detecting an endpoint during a chemical mechanical polishing (CMP) process is provided. A reflected spectrum data sample is received that corresponds to a plurality of spectrums of light reflected from an illuminated portion of the surface of a wafer. The reflected spectrum data sample is normalized using a normalization reference comprising a first reflected spectrum data sample obtained earlier during the CMP process. In addition, the normalization reference is updated during the process using a second reflected spectrum data sample obtained earlier during the CMP process. The second reflected spectrum data sample is obtained after the first reflected spectrum data sample. In this manner, an endpoint is determined based on optical interference occurring in the reflected spectrum data.